

MEMOIR
OF
GEORGE BROWN GOODE.
1851-1896.

BY
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BIOGRAPHICAL MEMOIR OF GEORGE BROWN GOODE.

GEORGE BROWN GOODE was born at New Albany, Indiana, on February 13, 1851, and died at his home in Washington on September 6, 1896, after a life of forty-five years, than which few human lives have ever been better filled.

In those years he won the warm affection of a wide circle of friends and the trust and confidence of a multitude of subordinates in the position to which his own abilities had carried him. He interested himself and interested others in ever-widening circles of research, and such varied work that it seemed to those who knew what he was doing, incomprehensible that one man could accomplish so much in one single life; and when this came to an end its cessation was like the loss of a part of themselves to those who knew him best, by whom he is remembered with an affection which men rarely gain from one another.

He was the son of Francis Collier Goode and Sarah Woodruff Crane. The Goode family trace their ancestry in this country to John Goode, of Whitby, who settled in Virginia prior to 1661.*

While still settled in Virginia, many members of the Goode family went to the South and West to do pioneer work in building up villages and towns on what was then the outskirts of civilization.

Dr. Goode's father, Francis Collier Goode, was born in Waynesville, Ohio, and was a merchant in Ohio and Indiana. In 1857 he retired from business, removing to Amenia, New York; subsequently to Middletown, Connecticut, and later to Arlington,

*The history of this family has been carefully traced by Dr. Goode in "Virginia Cousins: A Study of the Ancestry and Posterity of John Goode, of Whitby, a Virginia Colonist of the Seventeenth Century, with notes upon related families, a key to southern genealogy and a history of the English surname Gode, Goad, Goode, or Good from 1148 to 1887, by G. Brown Goode, with a preface by R. A. Brock, Secretary of the Virginia and Southern Historical Societies. Richmond, Virginia, J. W. Randolph & English," MDCCCLXXXVII.

Florida, and occasionally spent winters in the Bermudas, Tennessee, North Carolina, Virginia, and Washington city.

His mother, Sarah Woodruff Crane, was a descendant of Jasper Crane, who came to New England during the first ten years of the first settlement, and was one of the pioneers of Newark, New Jersey.

Dr. Goode was thus of sturdy American parentage on both sides, numbering among his ancestors the founders of the Virginia, Massachusetts, Connecticut, and New Jersey colonies. The family was singularly free from foreign mixture, not 10 per cent. of the marriages among the numerous descendants having been with persons whose ancestors came to America later than 1725.*

He passed his early childhood in Cincinnati and his later childhood and early youth in Amenia, New York, where he was prepared for college by private tutors. His father was a man of studious habits and not devoid of an interest in science. He had assembled in his library a set of the Smithsonian Reports, which young Goode read as a boy. It was through these volumes that he was first attracted to science and to the Smithsonian Institution, his boyish ambition being to become connected with it and to study under Professor Baird.

He entered Wesleyan University at Middletown, Connecticut, in 1866, and was graduated in 1870. Although scarcely more than fifteen when he entered college and a little over nineteen years of age at the time of his graduation, being the youngest member of the class, his work in the studies of the natural history group was so satisfactory as to attract the favorable notice of his teachers. The years at Middletown foreshadowed the strong love for nature, the museum interest, ability in classification, and even the literary talent, which were the distinguishing features of all Dr. Goode's later career.

When he went to college his father removed to Middletown and became a neighbor to Orange Judd, the pioneer of agricultural journalism in this country and closely identified with the advancement of scientific agriculture. There sprang up between the daughter of Mr. Judd and young Goode a friendship which ripened into love and resulted in their marriage, of which I speak here because Dr. Goode himself felt that the friendship with

* "Virginia Cousins," p. xiv.

Mr. Judd, thus brought about through his daughter, had the largest share in determining his future career. The two young people had similar tastes in natural history and outdoor life. As early as 1869 Dr. Goode commenced to record in the "College Argus" and the "College Review" his outdoor rambles. He was at this time a young man of stout frame and vigorous health, engaging in all of the athletic sports known to college students of that day.

In 1870 he entered Harvard University as a post-graduate student under Professor Louis Agassiz, whose genial influence he glowingly describes in his youthful letters.

Mr. Judd had presented to Wesleyan University a building, known as the Orange Judd Hall of Natural Science. This building was in progress of erection during Mr. Goode's student years and was dedicated in the commencement week of 1871. "Before that time," says Professor Rice, "the natural history collections of Wesleyan University were scattered in several buildings, very imperfectly labeled and arranged, and mostly inaccessible to students or visitors. The spacious rooms in Judd Hall first gave the opportunity to arrange and display these collections in such manner as to give them the dignity of a museum." The work which Dr. Goode had done while a student under Professor Agassiz caused an invitation to be extended to him to undertake the arrangement of this collection, and in 1871, when but a little over twenty, he was given the title of Curator of the Museum, and undertook the installation of the collections. It was in this work that he "first showed that genius for museum administration which he was destined afterward to display in the larger field." He retained his official connection with Middletown until 1877, although the greater part of these years was spent either in Washington or in the field. During a portion of this time, although absent from Middletown, he received a salary from Wesleyan University and was allowed in exchange to send to the Museum duplicates of natural history specimens in the Smithsonian Institution, as well as the duplicates of the collections which he made. He always retained a strong feeling of affection for his alma mater, and founded the Goode prize, intended to stimulate an interest in biologic studies. He was one of the editors of the 1873 and 1883 editions of the Alumni Record of Wesleyan University, and re-

ceived the honorary degree of Doctor of Laws from that institution in 1893.

Dr. Goode's mother died in his infancy, and he found in his father's second wife an affectionate and sympathetic helper, who was a strong believer in the possibility of his future scientific career. To her he owed his introduction to Professor Baird, whom he first saw at Eastport, Maine, in 1872, and this meeting was the turning point of his professional life. Through it he not only got the larger opportunities for natural history work afforded by the Fish Commission and the Smithsonian Institution, but Professor Baird singled him out almost from the first as his chief pupil, his intimate friend, his confidential adviser, and his assistant in all the natural history work in which he was engaged. The splendid advantages which Professor Baird accorded his young friend were repaid by an intense devotion.

Mr. Goode said once that he could lay down his life for such a man, and indeed he almost did so, for his originally robust health was impaired by this devotion to Professor Baird's service, particularly at the Philadelphia Exposition of 1876, which he left invalided, and the effects of his overwork in which left him a weaker man through his after life. The death of Professor Baird in 1887 affected him so deeply that it was not until 1895 that he was once heard to say that he had but just recovered from the loss.

He became in 1872 a volunteer in the United States Fish Commission, the year after the organization of that bureau, and he continued this work, making collections in 1872 at Eastport, Maine, in 1873 in Casco bay, and in 1874 at Noank, on Long Island sound. The years from 1872 to 1878 show collections of fishes made by him at the points named, as well as in Bermuda, Florida, Connecticut, and other places. Nearly twenty papers and articles relating to the Fish Commission and to fisheries appeared from his pen during the first four years of this voluntary association with the Fish Commission. He was interested not only in the scientific side of ichthyological work, but devoted great attention to the economic side. It was in 1877 that he found his first specimen of a deep-sea fish and laid the foundation of the studies which culminated in the splendid memoir on "Oceanic Ichthyology" by himself and Dr. Bean. During these years with Professor Baird he became experienced in all the work of the Fish Commission, and upon his death was appointed Com-

missioner of Fisheries by the President. The position up to this time had been an honorary one, but Mr. Goode informed President Cleveland that the work had grown to such an extent that it was not possible for any person who was actively engaged in the Smithsonian Institution or elsewhere to continue it. President Cleveland urged him several times to permanently accept the position of Commissioner of Fisheries, and the Committee on Appropriations of Congress had provided a salary which was larger than the one which Mr. Goode was receiving or ever did receive, but he resolutely declined, asserting that his life's ambition had been to become associated with the Smithsonian Institution; that his heart was in the Museum, and that he could not give it up. As related to his work in the Fish Commission, the facts may be mentioned that in 1877 he was employed by the Department of State on statistical work in connection with the Halifax Commission, and in 1879 and 1880 he was in charge of the Fisheries Division of the Tenth Census. His administrative abilities were strongly brought out in the organization of this work. Professor Henry F. Osborn describes his method as follows: "Special agents were sent out to every part of the coast and to the Great Lakes to gather information. Goode worked at it himself on Cape Cod and manifested the same enthusiasm as in every other piece of work he took up. He interested himself in getting together a collection representing the methods of the fisheries and the habits of the fishermen. Neglecting neither the most trivial nor important objects, branching out into every collateral matter, he showed his grasp both of principles and of details." He was United States Commissioner to the Internationale Fischerei Ausstellung in 1880 at Berlin and to the International Fisheries Exposition held at London in 1883. From circular order No. 139, issued by Commander J. J. Brice, United States Commissioner of Fish and Fisheries, I extract the following sentences: "Dr. Goode is best known for his researches and publications on the fishes and fisheries of the United States, on which subjects he came to be recognized as the leading authority. . . . He has been one of the most fruitful and valued contributors to the reports and bulletins of the Fish Commission, and in his death the fishing interests of the country have sustained a severe loss."

As I have before said, his connection with the Smithsonian

Institution followed shortly after the acquaintance with Professor Baird, who invited him to spend the winter of 1873 in Washington for the purpose of arranging the ichthyological specimens and with the understanding that as a payment for this service he was to be allowed to select duplicates for the museum at Middletown. At that time he had the title of Assistant Curator, which was later changed to Curator, and, although the relations to Middletown continued, the ties with the Institution were becoming stronger and stronger. He now met Professor Henry for the first time, and became one of the small coterie of Smithsonian men who at that time lived in the Smithsonian building and formed a part of the hospitable household which Professor Henry maintained. In these early days the staff was an extremely small one, being only thirteen persons, including honorary collaborators and subordinates. Dr. Goode threw himself into this work with uncalculating devotion. Professor Baird's duties were becoming more and more numerous, and after he became Secretary of the Institution Dr. Goode took the Museum work upon his willing shoulders. In 1881, when the new Museum building was completed and the United States National Museum really organized, Mr. Goode, then thirty years of age, was made Assistant Director. In that year he prepared a circular, known as Circular No. 1 of the National Museum, which set forth a scheme of administration for the Museum so comprehensive in its scope, so exact in its details, so practical in its ideas that it is with but few modifications still the guide for the Museum staff. On January 12, 1887, Professor Baird, whose health was then failing, appointed Mr. Goode as Assistant Secretary of the Smithsonian Institution in charge of the National Museum, and from that time until his death he had the fullest charge of the entire administration of the Museum.

It is hard to say whether Mr. Goode was best known as a museum director or a naturalist. I of course had more occasion to see his work from the administrative side. It would be impossible to understand his success in this field without thinking of the character of the man, and here I may repeat what I have said elsewhere, that if there was one quality more than another which formed the basis of his character it was sincerity—a sincerity which was the ground of a trust and confidence such as

could be instinctively given even from the first only to an absolutely loyal and truthful nature.

I do not know whether a power of reading character is more intuitive or acquired, but at any rate, without it men may be governed, but not in harmony, and must be driven rather than led. Dr. Goode was in this sense a leader, quite apart from his scientific competence. Every member of the force he controlled, not only among his scientific associates, but down to the humblest employés of the Museum, was an individual to him, with traits of character which were his own and not another's, and which were recognized in all dealings, and in this I think he was peculiar, for I have known no man who seemed to possess this sympathetic insight in such a degree, and certainly it was one of the sources of his strength.

I shall have given, however, a wrong idea of him if I leave any one under the impression that this sympathy led to weakness of rule. He knew how to say "no," and said it as often as any other, and would reprehend, where occasion called, in terms the plainest and most uncompromising a man could use, speaking so when he thought it necessary, even to those whose association was voluntary, but who somehow were not alienated as they would have been by such censure from another. "He often refused me what I most wanted," said one of his staff to me; "but I never went to sleep without having in my own mind forgiven him."

I have spoken of some of the moral qualities which made all rely upon him and which were the foundation of his ability to deal with men. To them was joined that scientific knowledge without which he could not have been a Museum administrator; but even with this knowledge he could not have been what he was, except from the fact that he loved the museum and its administration above every other pursuit, even, I think, above his own special branch of biological science. He was perhaps a man of the widest interests I have ever known, so that whatever he was speaking of at any moment seemed to be the thing he knew best. It was often hard to say, then, what love predominated; but I think that he had, on the whole, no pleasure greater than that in his Museum administration, and that, apart from his family interests and joys, this was the deepest love of all. He refused advantageous offers to leave it, though I ought to grate-

fully add, that here his knowledge of my reliance upon him and his unselfish desire to aid me were also among his determining motives in remaining. They were natural ones in such a man.

What were the results of this devotion may be comprehensively seen in the statement that in the year in which he was first enrolled among the officers of the Museum the entries of collections numbered less than two hundred thousand, and the staff, including honorary collaborators and all subordinates, thirteen persons, and by comparing these early conditions with what they became under his subsequent management.

Professor Baird at the first was an active manager, but from the time that he became Secretary of the Institution he devolved more and more of the Museum duties on Dr. Goode, who for nine years preceding his death was in practically entire charge of it. It is strictly within the truth, then, to say, that the changes which have taken place in the Museum in that time are more his work than any other man's; and when we find that the number of persons employed has grown from thirteen to over two hundred, and the number of specimens from two hundred thousand to over three million, and consider that what the Museum now is, its scheme and arrangement, with almost all which make it distinctive, are chiefly Dr. Goode's, we have some of the evidence of his administrative capacity. He was fitted to rule and administer both men and things, and the Museum under his management was, as some one has called it, "A house full of ideas and a nursery of living thought."

"His success of administration," says Professor Osborn, "also came partly from an instinctive knowledge of human nature. . . . He sought out the often-latent best qualities of the men around him and developed them. When things went out of joint and did not move his way, he waited with infinite patience for the slow operation of time and common sense to set them right. He was singularly considerate of opinion, . . . fertile of original ideas and suggestions, full of invention and of new expedients, studying the best models at home and abroad, but never bound by any traditions of system or of classification. . . . To all his work also he brought a refined artistic taste, shown in his methods of printing and labeling, as well as in his encouragement of the artistic, and therefore the truthful and realistic development of taxidermy in the arrangement of

natural groups of animals. To crown all, like Baird he entered into the larger conception of the wide-reaching responsibilities of his position under the Government, fully realizing that he was not at the head of a university or of a metropolitan museum, but of the Museum of a great Nation. Every reasonable request from another institution met a prompt response. . . . Not the advancement of Washington science, but of American science, was his dominating idea."

There was no subject in connection with the administration of the Museum to which he did not at some time or other give his personal attention. He had a quick eye for color and for form, understood the art of decorating and case-building, and had besides a special knowledge of subjects so widely remote from his own biologic interests that it is a question whether a new species or a new musical instrument gave him the greater pleasure. So fully could I rely on his judgment in all things, that even in matters not connected with the Museum I frequently sought the benefit of his advice, and this was sure to be sound, whether it related to the typography or paper of a new volume of the publications, or to some weighty question of policy. It is difficult to single out from among the manifold matters relating to the Institution proper which were confided to him one single thing. I cannot, however, but recall the fact that he seemed to me, both because of the soundness of his judgment and the wide domain of science with which he was acquainted, the fittest person to place in charge of the Hodgkins award made two years ago. To this entire work, from the time of Mr. Hodgkins' gift, down to the closing of the award, Mr. Goode gave unremitting and zealous attention, having served as chairman both of the preliminary committee and the committee on award.

The field of natural history, of antiquities, of art, of books, is so vast that a mere assemblage of objects, of books, of prints, of engravings, is not in itself significant. Collecting is an art which many essay but few attain. Mr. Goode was eminently a collector. As early as 1872 we find him collecting the fishes of the Bermudas, which he worked up in a catalogue, giving in each case, in addition to characteristics previously noted, descriptions of the colors of the fishes while living, notes on the size and proportions, observations of habits, hints in reference to the origin and meaning of their popular names, and notes upon modes of

capture of economic value. The same careful methods of collection he followed in the subsequent expeditions which he undertook in the field. It was not alone in natural history, however, that this talent for collecting displayed itself. Every possible sort of specimen or information which was at hand he collected. He would bring back from every exposition which he attended methodical collections, frequently of materials overlooked by others. Every visit to a foreign country resulted in the bringing back of a collection, not of miscellaneous objects, but of a series which could themselves be placed on exhibition. These might be musical instruments, ecclesiastical art, early printed books, medals, or ivories, and the same taste and discrimination and good judgment were displayed in their selection. He collected, however, not only objects, but also words and ideas. From the assembling of the common names of plants and animals in America, there grew a large collection of Americanisms, probably larger than any single collection published. Portraits of scientific men, portraits of Washington and Jefferson, autographs, Confederate imprints, Americana, American scientific text-books—these are but a few of the fields in which Dr. Goode collected.

He was a naturalist in the broadest sense of that word, following in the footsteps of Agassiz and Baird. "He had," says Dr. Gill, "acquaintance with several classes of the animal kingdom, and especially with the vertebrates. He even published several minor contributions on herpetology, the voice of crustacea, and other subjects. . . . The flowering plants also enlisted much of his attention, and his excursions into the fields and woods were enlivened by knowledge of the subjects he met with." "The designation naturalist," says Professor Osborn, "was one which Goode richly earned and which he held most dear, and our deep sorrow is that his activity as naturalist extended only over a quarter of a century." . . . "As a naturalist, Goode did not close any of the windows opening out into Nature. His broad spirit in public affairs displayed itself equally in his methods of field and sea work and in the variety of his observations and writings. While fishes became his chief interest, he knew all the eastern species of birds after identifying and arranging the collection in his college museum. He loved plants, and in the later years of his life took great pleasure in the culture of the old-fashioned garden around his house. . . . Many of his briefer

papers deal directly with the biological problems which attracted his interest, especially among reptiles and fishes, touching such questions as migration, coloring, albinism, mimicry, parasitism, feeding and breeding habits, the relation of forest protection to the protection of fishes."

Perhaps no one can be a "naturalist" in the larger sense without being directly a lover of Nature and of all natural sights and sounds. One of his family says, "He taught us all the forest trees, their fruits and flowers in season, and to know them when bare of leaves by their shapes; all the wayside shrubs, and even the flowers of the weeds; all the wild birds and their notes, and the insects. His ideal of an old age was to have a little place of his own in a mild climate, surrounded by his books for rainy days, and friends who cared for plain living and high thinking, with a chance to help some one poorer than he." He was a loving and quick observer, and in these simple, natural joys, his studies were his recreations, and were closely connected with his literary pursuits.

He was of course first and foremost an ichthyologist, and this through no lack of sympathy with the larger field, but because of the recognition of the fact that the larger field could not be successfully covered by one man.

His adherence to this subject as a specialty was undoubtedly determined by his long and intimate connection with the Fish Commission during the period of greatest advancement in methods of deep-sea exploration, the rich collections of fishes derived from that source being placed at his command. The novelties of structure and environment presented by this material, ever increasing as the work progressed, proved an attraction too strong to be resisted, even in the face of his varied official duties, and caused him to become distinctively a student of the marine forms.

His observations were not confined to any single branch of the subject, but were given the widest latitude that his time permitted. He was the discoverer of many new and strange species and an acknowledged authority on classification, but he took perhaps the greatest interest in questions regarding the geographical and bathymetrical distribution of fishes, a field in which his opportunities for investigation had been unexcelled. The color of fishes had also been a favorite study with him, and he had paid attention to many points in their morphology and

in the functions of special organs. He was especially well versed in the literature of ichthyology from the earliest times, and, after Professor Baird, was the most eminent exponent in this country of the benefits to be secured to the practical fisheries through the application of scientific teachings.

Dr. Gill in reviewing his scientific career said: "A 'Catalogue of the Fishes of the Bermudas,'¹ published in 1876, furnished additional evidence of knowledge of the literature of his subject and ability to use it to advantage in the discussion of mooted questions, and it also evinced his power of observation.

"In the same year, 1876, appeared another work which to a still greater degree rendered manifest those same mental characteristics. The work was only a catalogue, but perhaps from no other publication can some intellectual qualities be so readily and correctly gauged by a competent judge as an elaborate catalogue. Powers of analysis and synthesis, and the ability to weigh the relative values of the material at hand, may make a 'mere catalogue' a valuable epitome of a collection and of a science. Such a production was the 'Classification of the Collection to illustrate the Animal Resources of the United States,'[†] a work of 126 pages. Three years later this catalogue served as the basis for and was elaborated and expanded into a large 'Catalogue of the Collection to illustrate the Animal Resources and the Fisheries of the United States,'[‡] a volume of 351 pages.

¹Catalogue of the Fishes of the Bermudas, based chiefly on the collections of the United States National Museum. . . . Washington: Government Printing Office, 1876 (8°, pp. (2) 1-82, Bulletin United States National Museum, No. 5).

[†]International Exhibition, 1876. Board in behalf of United States Executive Departments. Classification of the Collection to illustrate the Animal Resources of the United States: A list of substances derived from the animal kingdom, with synopsis of the useful and injurious animals and a classification of the methods of capture and utilization. . . . Washington: Government Printing Office, 1876 (8°, pp. 126, a Second edition with supplementary title as Bulletin No. 6, United States National Museum).

[‡]International Exhibition, 1876. Catalogue of the Collection to illustrate the Animal Resources and the Fisheries of the United States, exhibited at Philadelphia in 1876 by the Smithsonian Institution and the United States Fish Commission, and forming a part of the United States National Museum. . . . Washington: Government Printing Office, 1879 (8°, pp. 351 (1), Bulletin United States National Museum, No. 14).

These catalogues were for the tentative and adopted arrangement of material exhibited by the Smithsonian Institution and the United States Fish Commission at the 'International Exhibition, 1876.'

"It was the ability that was manifested in these catalogues and the work incidental to their preparation that especially arrested the attention of Professor Baird and marked the author as one well adapted for the direction of a great museum. For signal success in such direction special qualifications are requisite. Only some of them are a mind well trained in analytical as well as synthetic methods, an artistic sense, critical ability, and multifarious knowledge, but above all, the knowledge of men and how to deal with them. Perhaps no one has ever combined in more harmonious proportions such qualifications than G. Brown Goode. In him the National Museum of the United States and the world at large have lost one of the greatest of museum administrators.

"As a naturalist, the attention of Dr. Goode was especially directed to and even concentrated on the fishes. His memoirs, contributed mostly to the Proceedings of the United States National Museum, were numerous and chiefly descriptive of new species. (For many of these he had as a collaborator Dr. Tarleton Bean, then the curator of fishes of the United States National Museum.) Some of the memoirs, however, dealt with special groups, as the Menhaden (1879), Ostraciontidae (1880), Carangidae (1881), the Swordfishes (1881), and the Eel (1882). His monograph of the Menhaden (*Brevoortia tyrannus*), contributed originally to the Report of the United States Commissioner of Fisheries* and then published as a separate work †—a large volume of nearly 550 pages and with 30 plates—is a model of critical treatment of information collected from all quarters; but

*The Natural and Economical History of the American Menhaden. In Report United States Commission of Fish and Fisheries, part V, 1879, Appendix A, pp. 1-529, pls. i-xxxi (xxx canceled), pp. 194-267 by Professor W. O. Atwater.

†American Fisheries: A History of the Menhaden, by G. Brown Goode, with an account of the Agricultural Uses of Fish by W. O. Atwater And an introduction, bringing the subject down to date. Thirty plates. New York: Orange Judd Company, 1880 (8°, pp. x (i), iii-xii, 1-529 (1), 31 pls., pl. 30 canceled).

his most important contributions were published as official Government reports and were the results of investigations especially undertaken for such reports. Especially noteworthy were the volumes comprising the results of the Census of 1880.

“The 1880 Census was planned and carried out on an unusual scale. For the fisheries the United States Commission of Fish and Fisheries coöperated, and Dr. Goode had general charge of the entire work. The assistants and special agents were consequently selected with judgment, and the results were very valuable. The huge mass of statistics was digested and condensed in seven large quarto volumes, representing five sections separately devoted to special branches of the subject.*

“Dr. Goode’s cares were mainly concentrated on the first section, treating of the ‘Natural History of Aquatic Animals,’ which was discussed in over 900 pages of text and illustrated by 277 plates. This work was by far the most complete survey of the economical fishes of the country that had ever appeared, and has since been the most prized; it led to another.

“After the appearance of the census volumes, Dr. Goode was urged to prepare a work for popular use. His consent to do so was followed by a volume, entitled ‘American Fishes, a popular treatise upon the game and food fishes of North America,’ † published by the Standard Book Company of New York. Inasmuch as none of the previous popular works on the American fishes had emanated from men of scientific eminence, it scarcely need be added that the new work had no rival in the field, so far as accurate information and details of habits were involved.

“A short time previously Dr. Goode had also prepared the text to accompany a series of twenty large folio colored portraits by

* The Fisheries and Fishery Industry of the United States. Prepared through the coöperation of the Commissioner of Fisheries and the Superintendent of the Tenth Census. By George Brown Goode, Assistant Director of the United States National Museum, and a staff of associates. Washington: Government Printing Office, 1884 (–1887, 5 sections in 7 volumes). “Section 1, Natural History of Aquatic Animals,” was mainly prepared by Dr. Goode.

† American Fishes: A popular treatise upon the game and food fishes of North America, with especial reference to habits and methods of capture, by G. Brown Goode, with numerous illustrations. New York: Standard Book Company, 1888 (8°, xvi + 496 pp., colored frontispiece).

an eminent artist, Mr. S. A. Kilbourne, of the principal 'Game Fishes of the United States.'*

"Never had investigations of the deep sea been conducted with such assiduity and skill as during the last two decades. The chief honors of the explorations were carried off by the British and American Governments. As the fishes obtained by the vessels of the United States Fish Commission were brought in they were examined by Dr. Goode (generally in company with Dr. Bean) and duly described. At length Drs. Goode and Bean combined together data respecting all the known forms occurring in the abysmal depths of the ocean, and also those of the open sea, and published a résumé of the entire subject in two large volumes entitled 'Oceanic Ichthyology.'†

"This was a fitting crown to the work on which they had been engaged so long, and the actual publication only preceded Dr. Goode's death by about a fortnight.

"But the published volumes did not represent all the work of Dr. Goode on the abyssal fishes. He had almost completed an elaborate memoir on the distribution of those fishes, and, contrary to the conclusions of former laborers in the same field, had recognized for them a number of different faunal areas. It is to be hoped that this may yet be given to the world.

"Morphological and descriptive ichthyology were not cultivated to the exclusion of what is regarded as more practical features. In connection with his official duties as an officer of the United States Fish Commission he studied the subject of pisciculture in all its details. Among his many contributions to the subject are one on 'The First Decade of the United States Commission, its plan of work and accomplished results, scien-

* Game Fishes of the United States, by S. A. Kilbourne; text by G. Brown Goode. New York: Published by Charles Scribner's Sons, 1879-1881. (Folio, 46 pp., 20 plates, and map, published in ten parts, each with 2 plates, lithographs in water color, and four-page folio of text.)

† Smithsonian Institution. United States National Museum. Special bulletin. Oceanic Ichthyology: A Treatise on the Deep-sea and Pelagic Fishes of the World, based chiefly upon the collections made by the steamers *Blake*, *Albatross*, and *Fish Hawk* in the Northwestern Atlantic, with an atlas containing 417 figures, by George Brown Goode, Ph. D., LL. D., and Tarleton H. Bean, M. D., M. S. Washington: Government Printing Office, 1895, 2 vols., 4°; I, xxxv + 26, 553 pp.; II, xxiii + 26 pp., 123 pl.

tific and economical' (1880), another treating of the 'Epochs in the History of Fish Culture' (1881), and two encyclopædic articles 'The Fisheries of the World' (1882), and the one entitled 'Pisciculture,' in the Encyclopædia Britannica (1885)."

"The great work of his life, 'Oceanic Ichthyology,'" says Dr. Jordan, "was, however, written during the period of his directorship of the National Museum, and it was published but a month before his death. Almost simultaneously with this were other important publications of the National Museum, which were his also in a sense, for they would never have been undertaken except for his urgent wish and encouragement. If a personal word may be pardoned, 'The Fishes of North and Middle America,' which closely followed 'Oceanic Ichthyology,' would never have been written except for my friend's repeated insistence and generous help.

"The first recorded scientific paper of Dr. Goode is a note* on the occurrence of the bill-fish in fresh water in the Connecticut river. The next is a critical discussion of the answers to the question, 'Do snakes swallow their young?' In this paper he shows that there is good reason to believe that in certain viviparous snakes the young seek refuge in the stomach of the mother when frightened, and that they come out unharmed when the reason for their retreat has passed.

"The first of the many technical and descriptive papers on fishes was the 'Catalogue of the Fishes of the Bermudas,' † published in 1876. This is a model record of field observations and is one of the best of local catalogues. Dr. Goode retained his interest in this outpost of the great West Indian fauna, and from time to time recorded the various additions made to his first Bermudan catalogue.

"After this followed a long large number of papers on fishes, chiefly descriptions of species or monographs of groups. The descriptive papers were nearly all written in association with his excellent friend, Dr. Tarleton H. Bean, then curator of fishes in the National Museum.

"In monographic work Dr. Goode took the deepest interest, and he delighted especially in the collection of historic data con-

* American Naturalist, vol. v, p. 487.

† Bulletin No. 5, United States National Museum.

cerning groups of species. The quaint or poetical features of such work were never overlooked by him. Notable among these monographs are those of the Menhaden, the Trunk-fishes, and the Sword-fishes.

“The economic side of science also interested him more and more. That scientific knowledge could add to human wealth or comfort was no reproach to him. In his notable monograph of the Menhaden* the economic value as food or manure of this plebeian fish received the careful attention which he had given to the problems of pure science.

“Dr. Goode’s power in organizing and coördinating practical investigations was shown in his monumental work † on the American Fisheries for the Tenth Census, 1880. The work of the record of the fisheries and associated marine industries was placed in his hands by Francis A. Walker, Superintendent of the Census. Under Dr. Goode’s direction skilled investigators were sent to every part of the coast and inland waters of the country.”

His “American Fishes,” a popular treatise upon the game and food fishes of North America, published in 1888, is deserving of a special mention both because of the charming literary style in which it is written as well as its scientific accuracy and excellence. The wealth and aptness of the chapter headings of this book show that Mr. Goode’s wide reading was associated with everything which could illustrate his science on the literary side. He had a knowledge of everything even remotely connected with his ichthyological researches from St. Anthony’s “Sermon to Fishes” to the literature of fish cookery, while in one of his earliest papers, written at nineteen, his fondness for Isaac Walton and his familiarity with him are evident.

While never claiming the title of anthropologist, he was yet a close student of the anthropological and ethnological work in this country and abroad, and it is not too much to say that no professional anthropologist had a higher ideal of what his science

* “The Natural and Economical History of the American Menhaden.” In Report of United States Commission of Fish and Fisheries, part 5. Washington, 1879.

† “The Fisheries and Fishery Industry of the United States.” Prepared through the coöperation of the Commissioner of Fisheries and the Superintendent of the Tenth Census. Washington, 1884.

might come to be or exercised a more discriminating criticism on its present methods and conditions than did Dr. Goode. He was, moreover, not only interested in the biological problems of the anthropologist, but in technology and the history of art; the history of human invention and archaeology were equally in his mind, and his suggestiveness in each of these fields could be attested by all of the anthropologists with whom he came in contact.

"It would be difficult," says Professor Mason, "to find among those who are professional anthropologists a man who had a more exalted idea of what this science ought to be. There is not perhaps another distinguished scholar who has endeavored to collect into one great anthropological scheme all of the knowledge of all men in all ages of the world and in all stages of culture."

Dr. Goode was peculiarly related to the management of exhibitions and did more than any other person in America to engraft upon them museum ideas and widen their scope from the merely commercial and industrial to the educational and scientific.

His first experience in this field was in 1876, at the Centennial Exhibition held in Philadelphia. Professor Baird was in charge of the exhibits of the Smithsonian Institution and Fish Commission, and being much occupied at the time with other matters, the greater part of the installation and other work connected with the exhibit was placed under the immediate supervision of Mr. Goode. The work done by the Smithsonian and Government Departments at this exhibition was pioneer work, it being the first international exhibition in which the United States Government was engaged. It is not too much to say that the arrangement of the Smithsonian exhibit at Philadelphia was the model on which all subsequent exhibits of the kind were based, and that the classification, the installation, and the arrangement have had a lasting influence on exhibition work everywhere. But every administrative activity of this sort was sure to result in some literary product, so that we find in 1876 Mr. Goode published "A Classification of the Collections to illustrate the Animal Resources of the United States: A list of substances derived from the animal kingdom, with synopsis of the useful and injurious animals, and a classification of the methods of capture and utilization." This work was afterwards published in an enlarged form as a bulletin of the National Museum.

His services as commissioner for the United States Government at the Fisheries Exhibition of Berlin in 1880 and London in 1883 have already been alluded to. These, too, resulted in several articles in German and in a bulletin of the Museum, while several addresses and papers delivered at the Conferences of the International Fisheries Exhibition in London were published in the papers of the conferences, and full reports were made by Dr. Goode on his return to this country and published at the Government Printing Office.

He was the representative of the Smithsonian Institution at all the subsequent exhibitions held in this country—Louisville, 1884; New Orleans, 1885; Cincinnati, 1888; Chicago, 1893, and Atlanta, 1895—serving also as a commissioner and for a time acting Commissioner General to the Columbian Exposition held at Madrid in 1892.

The exhibits made under his direction were never repetitions. Each one contained new material never shown before, and exhibited the progress of the Institution and Museum, as well as the advances made in the arts of taxidermy, installation, and labelling. Mr. Goode, too, always bore in mind the local interest, and endeavored to show specimens and materials which would be instructive to persons residing in the neighborhood of the place at which the exposition was held. Thus at Cincinnati objects were prominent which related to the Ohio valley, for Madrid he prepared an exhibit to illustrate the conditions of human and animal life in America at the time of the Spanish discovery, whilst at Atlanta especial stress was laid on showing the fauna, flora, archæology, and mineral resources of the south Atlantic states. He prepared the report on the Madrid Exposition, and at the request of the Government Commission drew up a provisional classification for the Chicago Exposition, which, while not formally accepted, was used throughout in the official classification, many pages being copied without a change. For the Chicago, as well as the Atlanta Exposition, he prepared a carefully written catalogue, and for the latter an excellently condensed sketch of the Smithsonian Institution.

Nowhere were Mr. Goode's administrative talents more strongly shown than in an exhibition. The plans of the floor space, the cases, the specimens were all carefully arranged in advance. Boxes were especially made of lumber which could be utilized

for cases or platforms. Cases were marked, and not very long before the opening of the exposition the entire mass would be deposited on the bare space assigned to the Smithsonian exhibit. Usually other exhibitors had their material half arranged by this time, and the fear was expressed by sympathetic bystanders that the Smithsonian would not be ready. The cases would be unpacked and the specimens put in them in whatever position they happened to stand, and up to the last day all would seem to be in confusion; but Dr. Goode knew his resources and his men as a general knows his army. Suddenly all detailed work would come to an end, and in the course of a few hours, as if by magic, the entire exhibit would be put in place. He had a pardonable pride in this sort of generalship, for whether at Chicago or Atlanta it had never failed him, and it earned the highest encomiums at Berlin, London, and Madrid.

Dr. Goode's services at these various expositions were recognized by diplomas and medals, and from the Spanish government he received the order of Isabella the Catholic, with the grade of commander.

I have already spoken of Mr. Goode's administrative qualities as shown in his management of the National Museum; but his contributions to museum administration and the history of museums were not confined to his own work. From all parts of America and even as far distant as Australia his opinion was sought with regard to the plans for museum buildings as well as on minor matters of installation. All requests for such information and advice were fully answered in minute detail.

It was into his papers on museums that some of his best thoughts went, and it was there that we find epigrammatic statements which are constantly quoted by all interested in the matter.

The first paper by him on this subject appeared in the "College Argus" March 22, 1871. It was entitled "Our Museum," and was a description of the collection in Judd Hall. This article indicated plainly the museum instinct, for it was largely intended to make known the deficiencies in the collection, and pointed out how students and professors could make these good on their summer excursions. He also published a guide to this museum.

In 1888 he read before the American Historical Association a paper entitled "Museum History and Museums of History."

Here he traced the growth of the museum idea from the beginning down to the present time, repeating his now oft-quoted phrase, "An efficient educational museum may be described as a collection of instructive labels, each illustrated by a well selected specimen." Atlases of ethnological portraits and works like those of Audubon he described as "not books, but museum specimens masquerading in the dress of books."

Even more forcible was a lecture delivered before the Brooklyn Institute in 1889, entitled "Museums of the Future." "The museum of the past," he wrote, "must be set aside, reconstructed, transformed from a cemetery of bric-a-brac into a nursery of living thoughts." . . . "The people's museum should be much more than a house full of specimens in glass cases. It should be a house full of ideas, arranged with the strictest attention to system." . . . "A finished museum is a dead museum, and a dead museum is a useless museum."

Most noteworthy, however, was his paper contributed to the Museums' Association of Great Britain in 1895, entitled "The Principles of Museum Administration." This was a carefully prepared codification of "the accepted principles of museum administration," which Mr. Goode hoped would "be the cause of much critical discussion." The ideas were presented in the form of aphorisms and were exceptionally clear cut, ending with the assertion that "the degree of civilization to which any nation, city, or province has attained is best shown by the character of its public museums and the liberality with which they are maintained."

This paper was warmly welcomed by museum experts, many of whom testified by their letters the interest they had in the clear presentation of the principles which should guide the museum administrator. At the 1896 meeting of the same Association Mr. Bather said: "When I read the magnificently exhaustive address by Dr. G. Brown Goode, published in our last report, it was manifest that all the ideas I had ever had were anticipated in that masterly production;" whilst an obituary note in the same volume says, "His early death is a great loss, not only to the United States National Museum, but museums in general, for he took a deep and active interest in all things affecting their development and well-being."

The "Manchester Guardian," September 20, 1896, says: "He was a recognized authority on all matters affecting museum administration, and in this capacity he last year wrote a paper on the principles of museum management and economy, which was brought before the annual Congress of the Museums Association at Newcastle, and has since attracted much attention as an admirable exposition of the general theory of administration applicable to museum work in all its branches. It is of interest to note that Dr. Goode's definition of a museum is an institution for the preservation of those objects which best illustrate the phenomena of nature and the works of man, and the utilization of these for the increase of knowledge and for the culture and enlightenment of the people. In this spirit Dr. Goode worked, and he not only achieved much in his own country, but was also ever ready to cordially coöperate with foreign kindred institutions, especially those in England, for the advancement of museum work as a means of education."

These activities would have been sufficient for an ordinary man, but in addition he was the historian of American science.

In 1886 he delivered, as president of the Biological Society of Washington, an address entitled "The Beginnings of Natural History in America," tracing it from Thomas Harriott, who came to this country in 1585, reciting the scientific labors of Captain John Smith, John Ray, Thomas Jefferson, and a host of others. The spirit which actuated this address is well illustrated in the following paragraphs: "It seems to me unfortunate, therefore, that we should allow the value of the labors of our predecessors to be depreciated, or to refer to the naturalists of the last century as belonging to the unscientific or the archaic period. It has been frequently said by naturalists that there was no science in America until after the beginning of the present century. This is, in one sense, true; in another, very false. There were then, it is certain, many men equal in capacity, in culture, in enthusiasm to the naturalists of today, who were giving careful attention to the study of precisely the same phenomena of nature. The misfortune of the men of science in 1785 was that they had three generations fewer of scientific predecessors than we."

This address he followed up by a second, entitled "The Beginnings of American Science: The Third Century," delivered

in 1888, also before the Biological Society. He divided the period from 1782 to 1888 into three periods, which he called after the names of Jefferson, Silliman, and Agassiz.

Continuing along this same line, he contributed to the American Historical Association, in 1890, a paper on "The Origin of the National Scientific and Educational Institutions of the United States."

The material contained in these various papers was summed up in an unpublished work entitled "What has been done for Science in America, 1492-1892," which illustrates in an interesting way the development of Dr. Goode's mind, for in this study as much attention is given to astronomy, physics, and even comparative philology as is paid to natural history. Parallel with this work may be mentioned a collection of portraits of almost every scientific man of importance mentioned in any of these four essays. Besides these, he wrote an article in the "Science News," 1878, entitled "The Earliest American Naturalist, Thomas Harriott."

He was greatly interested in American history, a close student of the writings of the fathers—more especially of Washington and Jefferson—and an enthusiastic investigator of Virginia history, for which he had assembled a great mass of original material. He was especially interested in the study of institutional history, which he thought approximated most nearly to the scientific method. It is more than likely that this interest grew out of his studies in genealogy, the most splendid result of which is his "Virginia Cousins," though a great mass of material, still unpublished, attests the fact that these genealogical collections were intended to cover the South and to serve as a contribution to southern history. He relates in the prologue to his "Virginia Cousins" that his interest in the Goode family tree was awakened in him by his father at the age of twelve.

The significance of genealogical studies for American history he recognizes in the following words: "The time is coming when the sociologist and the historian will make an extensive use of the facts so laboriously gathered and systematically classified by genealogists, and it is probable that this can be better done in the United States than elsewhere;" and again, "One of the elements of satisfaction in genealogical study legitimately arises from the success of our attempts to establish personal relations

with past ages and to be able to people our minds with the images of our forefathers as they lived two, three, four hundred years ago.”

But there was a scientific interest which attached to this work, as well as an historical one, for Dr. Goode was a strong believer in heredity, and he was profoundly impressed with the idea that man's capabilities and tendencies were to be explained by the characteristics of the men and women whose blood flowed through their veins.

This idea, too, is brought out strongly in his biographical work, nowhere more strongly than in his biographies of Henry, Baird, and Langley (almost the last work he ever did) for the Smithsonian Half Century Book, and it is carefully worked out in an elaborate plan of a biography of Professor Baird, which would probably have been the next literary work he would have undertaken had his life been spared.

He was greatly interested in bibliography, his methods in this science being most exact. He published bibliographies of Spencer Fullerton Baird, Charles Girard, Philip Lutley Sclater, and had under way bibliographies of Theodore Gill and David Starr Jordan. “A gigantic work in the same line,” says Dr. Gill, “had been projected by him and most of the materials were collected; it was no less than a complete bibliography of ichthyology, including the names of all the genera and species published as new. In no way may ichthyology at least more feel the loss of Goode than in the loss of the complete bibliography.”

Mr. Goode was a student of the history of the scientific societies, and was himself deeply interested in their welfare. In all the Washington scientific societies he was an active member, serving as president both of the Biological Society and the Philosophical Society, before which he delivered his notable address on the history of American science. He also belonged to the Anthropological and Geographic Societies of Washington and stoutly maintained the traditions of all these. He was elected a member of the National Academy of Sciences in 1888, was for many years a member of the Association for the Advancement of Science, being elected vice-president of the Zoölogical Section last summer, a few days before his death. He was a member of the American Philosophical Society, of the American Society of Naturalists, and a Fellow of the American Academy of Arts and

Sciences, and among foreign societies he had been honored by election to the Société des Amis des Sciences Naturelles de Moscou, Société Zoologique de France, Zoölogical Society of London, and the Société Scientifique du Chile.

He seemed to regard historical and patriotic societies with an equal interest, being a member of the council of the American Historical Association and a member of the Virginia Historical Society and the Columbian Historical Society of Washington and of the newly formed Southern Historical Society. His work in connection with the hereditary and patriotic societies was so especially near to him as to demand an unusual mention. He was one of the organizers of the Sons of the American Revolution of the District of Columbia, holding the offices of vice-president general and registrar general in the national society, and at the time of his death of president in the local society. He stimulated this society to issue historical publications, and saw a number through the press himself. A society known as the Sons of the Revolution having been founded with somewhat similar aims, Mr. Goode joined this organization with the avowed purpose of bringing them together. In this society he held the office of vice-president. He was lieutenant governor of the Society of Colonial Wars of the District of Columbia. He gave constant advice to the Daughters of the American Revolution during the period of their organization, and was instrumental in having the State of Massachusetts present, as a home for the Daughters of the Revolution in Georgia, its building at the Atlanta Exposition, which was a copy of the old Craigie house in Cambridge, once occupied by Washington as his headquarters, and later the residence of Longfellow. The success of this effort gave him special pleasure, for he regarded it as one of the means for promoting friendliness between the people of New England and the people of the South.

Although these numerous duties and activities would seem to have been more than enough for any single man, Mr. Goode did not stop here. Every scientific activity of the Government had at some time or other the advantage of his wise counsel and his active coöperation. His public duties outside of the Smithsonian in connection with the Department of State, the Fish Commission, the Census, and the various expositions abroad at which he represented this Government I have already alluded to; but he

was possessed of a higher order of patriotism which even this service did not satisfy. Mr. William L. Wilson, Regent of the Smithsonian Institution, lately Postmaster General of the United States and president of Washington and Lee University, says: "He was a richly endowed man—first, with that capacity and that resistless bent toward the work in which he attained his great distinction that made it a perennial delight to him; but he was scarcely less richly endowed in his more unpretending and large human sympathies, and it was this latter endowment that distinguished him as a citizen and as a historian.

"As a citizen he was full of patriotic, American enthusiasm. He understood, as all must understand who look with seriousness upon the great problems that confront a free people and who measure the difficulties of those problems—he understood that at least one preparation for the discharge of the duties of American citizenship was the general education of the people, and so he advocated, as far as possible, bringing down to the reach of all the people, not only the opportunities, but the attractions and the incitements to intellectual living.

"Dr. Goode, with the quick and warm sympathies of the man and of the historian, seems to have felt that he could do no greater service to the people of his day and generation and to his country than in the most attractive and concrete way, if I may so express it, to lead the young men of this country to a study of the history of the past—to the deeds and the writings of the great men to whom we owe the foundation and the perpetuation of our institutions."

He was greatly interested in the establishment of a National University, and in 1891 read a paper in Philadelphia, afterwards printed in the magazine "Lend a Hand," edited by Edward Everett Hale, entitled "Washington's University the Nation's Debt of Honor." In this article he computed that the bequest of Washington to the United States for a National University would, at compound interest, amount, in 1892, to four million one hundred thousand dollars, and he proposed that the National Government should restore this sum as the nucleus of the endowment for the National University. He acted as secretary of the executive committee, of which the Chief Justice was chairman, which was laboring to this end, and spared no effort to bring it to a successful conclusion.

Another project in which he was interested and for which he labored was a movement to fully open French universities to American students. His interest was excited in this movement because he thought that American science was becoming one-sided, owing to the fact that all of the students who went abroad visited German universities. Of the American committee, which, in coöperation with the French committee, had this matter in charge, Dr. Goode was the secretary, and he had the satisfaction of seeing this project brought to a successful issue before his death.

He had a strong interest in literature, and wrote in an excellent English style—clear, direct, and unpretentious. I have never met a mind in touch with more far-away and disconnected points than his, nor one of the same breadth and variety of writing, outside of the range of his own specialty. He had fine æsthetic tastes, and derived keen enjoyment from everything that was beautiful in nature or in art. He knew all natural sights and sounds, and recognized the note of every bird. He knew good pictures and good prints, was familiar with all the processes of graphic arts, and a good judge of them, both on the technical and the artistic side. He loved a beautifully printed book and an artistic binding. All these tastes he utilized in the publications which he wrote or edited. The work which he had in hand at the time of his death and to which he devoted so much loving care, the *History of the First Half Century of the Smithsonian Institution*, he aimed to make the expression of all these tastes. To no writing which he ever did, did he bring a higher literary expression than to the pages which he prepared for this book. He was at infinite trouble in discussing such matters as the form of the page, the style of the type, the quality of the paper, the initial letters, the head lines and illustrations, and the binding, and when he discussed any of these points with the expert craftsmen his knowledge of the details was as full as their own.

In spite of ill health and suffering, his overwrought, nervous system and his occasional severe mental depression, he never allowed himself to take a cynical view of human nature. He was a man who loved his fellow-men, and to whom that love was repaid with a warmth to a degree rare in this day. He made all other men's concerns his own. He sent notes and suggestions to hundreds of scientific men, whose work profited thereby, and in

the large circle of friends he had, scarcely one did not at one time or other come to Mr. Goode for advice and sympathy upon his own private affairs. He was an intensely loyal American patriot, ever careful that nothing should be said or done that should in any way reflect upon his country. He was especially devoted to Virginia and never happier than when he could spend a few days on her soil, looking over a historic house or copying some of the records which he hoped to turn to advantage in his historical studies.

"He is remembered," says Dr. Dall, "as one never weary of well-doing; who reached the heights, though ever aiming higher; whose example stimulated and whose history will prove a lasting inspiration."

"As a public-spirited naturalist," says Professor Osborn, "he leaves us a tender memory and a noble example, which helps us and will help many coming men into the higher conception of duty in the service and promotion of the truth. We cannot forget his smile nor his arm passing through the arm of his friend."

I have never known a more perfectly sincere and loyal character than Dr. Goode's, or a man who, with better judgment of other men or greater ability in molding their purposes to his own, used these powers to such uniformly disinterested ends, so that he could maintain the discipline of a great establishment like the National Museum while still retaining the personal affection of every subordinate.

I have scarcely alluded to his family life, for of his home we are not to speak here, further than to say that he was eminently a domestic man, finding the highest joys that life brought him with his family and children.

He has gone; and on the road where we are all going there has not preceded us a man who lived more for others, a truer man, a more loyal friend.